

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. - 48. (Cancelled)

49. (Currently Amended) A population of scattered light-detectable gold particles, wherein the coefficient of variation in size within said population is less than 5%, said gold particles comprising a surface coat of gold, wherein said gold particles have a diameter of from about ~~[[20]]~~ 40 nm to about 140 nm and have maximum absorption wavelengths of from about ~~[[525]]~~ 535 nm to about 635 nm, wherein said gold particles comprise at least one additional material on their surfaces, and wherein the population of scattered light-detectable gold particles excludes polystyrene particles.

50. (Previously Presented) The population of claim 49, wherein said at least one additional material does not interact with light in the visible region of the spectrum.

51. (Previously Presented) The population of claim 50, wherein said at least one additional material comprises a protein, a nucleic acid, a peptide or a carbohydrate.

52. (Previously Presented) The population of claim 50, wherein said at least one additional material comprises a polymer.

53. - 54. (Cancelled)

55. (Previously Presented) The population of claim 49, wherein said gold particles are spherical, oval or ellipsoidal.

56. - 70. (Cancelled)

71. (Previously Presented) The population of claim 49, wherein said gold particles further comprise a magnetic or ferroelectric material.

72. (Previously Presented) The population of claim 49, wherein said gold particles further comprise a mixture of metal-like materials and a magnetic or ferroelectric material.

73. (Previously Presented) The population of claim 49, wherein said gold particles further comprise silver and a magnetic or ferroelectric material.

74. (Cancelled)

75. (Cancelled)

76. (Currently Amended) The population of claim 49, wherein said gold particles are of a size between ~~[[20]]~~ 40 and 45 nanometers, between 50 and 70 nanometers or between 80 and 120 nanometers.

77. - 79. (Cancelled)

80. (Currently Amended) The population of claim 49, wherein said gold particles further comprise silver and are of a size between ~~[[20]]~~ 40 and 50 nanometers, between 50 and 70 nanometers or between 80 and 120 nanometers.

81. - 83. (Cancelled)

84. (Currently Amended) The population of claim 49, wherein said gold particles further comprise silver and are of a size between ~~[[20]]~~ 40 and 45 nanometers, between 50 and 70 nanometers or between 80 and 120 nanometers.

85. - 165. (Cancelled)

166. (Previously Presented) The population of claim 49, wherein said at least one additional material comprises a binding agent capable of binding specifically to a predetermined analyte.

167. (Previously Presented) The population of claim 166, wherein there is a detectable difference in the color of the scattered light scattered by said gold

particles in the population, and wherein said at least one additional material comprises two or more binding agents capable of binding different predetermined analytes.

168. (Previously Presented) The population of claim 166, wherein said binding agent comprises biotin, avidin, streptavidin, a nucleic acid, a protein, a peptide, an antibody, an antigenic substance, a receptor, a hormone, digoxinin, flourescein or a pharmaceutical agent.

169. (Previously Presented) The population of claim 49, wherein said at least one additional material comprises a plurality of base molecules.

170. (Previously Presented) The population of claim 49, wherein said at least one additional material comprises a plurality of different base molecules.

171. (Previously Presented) The population of claim 169 or 170, wherein said base molecules comprise a gelatin, a polyethylene glycol, a carbohydrate, a polyamino acid or a protein.

172. (Previously Presented) The population of claim 168, wherein said at least one additional material further comprises a binding agent that is bound to said base molecules, and wherein said binding agent is capable of binding specifically to a predetermined analyte.

173. - 175. (Cancelled)

176. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 60 to 120 nm, and wherein said additional material comprises biotin, avidin, streptavidin, a nucleic acid, a protein a peptide, an antibody, an antigenic substance, a receptor, a hormone, digoxinin, flourescein or a pharmaceutical agent.

177. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 80 nm, and wherein said additional material comprises biotin, avidin, streptavidin, a nucleic acid, a protein, a peptide, an antibody, an antigenic substance, a receptor, a hormone, digoxinin, fluorescein or a pharmaceutical agent.

178. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 40 nm to 100 nm, and wherein said additional material comprises biotin, streptavidin, a nucleic acid, a protein, a peptide, an antibody, an antigenic substance, a receptor, a hormone, digoxinin, fluorescein or a pharmaceutical agent.

179. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 60 nm, and wherein said additional material comprises biotin, streptavidin, a nucleic acid, a protein, a peptide, an antibody, an antigenic substance, a receptor, a hormone, digoxinin, fluorescein or a pharmaceutical agent.

180. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 80 nm, wherein said additional material comprises antibiotin antibodies, antidigoxinin antibodies, or antifuorescein antibodies.

181. (Previously Presented) The population of claim 49, wherein said gold particles are of a size of 60 nm, wherein said additional material comprises antibiotin antibodies, antidigoxinin antibodies or antifuorescein antibodies.

182. - 216. (Cancelled)

217. (Previously Presented) The population of claim 49, wherein said surface coat is about 0.5, 0.8, 1, 1.5, 2, 3, 4, 5, 6, 9, 10, 12, 19, 20, 39, 49 or 74 nm thick.

218. (Previously Presented) The population of claim 49, wherein said gold particles are solid gold particles.

219. (Previously Presented) The population of claim 49, wherein said gold particles have a diameter of from about 60 nm to about 100 nm and have maximum absorption wavelengths of from about 545 nm to about 575 nm.

220. (Previously Presented) The population of claim 49, wherein said gold particles have a diameter of about 80 nm and have maximum absorption wavelength of about 555 nm.